

Name: _____

Period: _____

1. Which of the following is a rational number? Circle all that apply.

- a. π
- b. $21.08\bar{2}$
- c. $\sqrt{9}$
- d. $1.4382768\dots$
- e. $\frac{2}{7}$

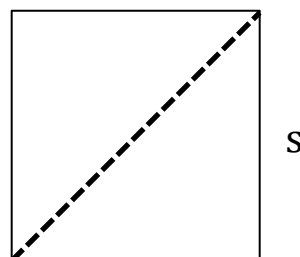
2. Select TRUE or FALSE for each statement.

- a. $\sqrt{19}$ is between 9 and 10 TRUE/FALSE
- b. $3.\bar{6}$ is equal to $\frac{11}{3}$ TRUE/FALSE
- c. $\sqrt{44}$ is a rational number TRUE/FALSE
- d. $\frac{9}{12}$ is a rational number TRUE/FALSE
- e. $0.529639\dots$ is an irrational number TRUE/FALSE

3. Compare the value of each expression to 7. Check the box that is true for each expression

Expression	Less than 7	Greater than 7
a. $\sqrt{42}$	<input type="checkbox"/>	<input type="checkbox"/>
b. $6\sqrt{2}$	<input type="checkbox"/>	<input type="checkbox"/>
c. $4\sqrt{3}$	<input type="checkbox"/>	<input type="checkbox"/>
d. $\sqrt{15}$	<input type="checkbox"/>	<input type="checkbox"/>
e. $3\sqrt{8}$	<input type="checkbox"/>	<input type="checkbox"/>

4. Josh cut a square sheet of paper along a diagonal to make two congruent triangles. The area of one triangle is 60.5 in^2 . Find the area of the square and use this to find the length of one side of the square.



5. Use the letters next to the numbers below to place them in the appropriate box on the number line. Some boxes will be blank.

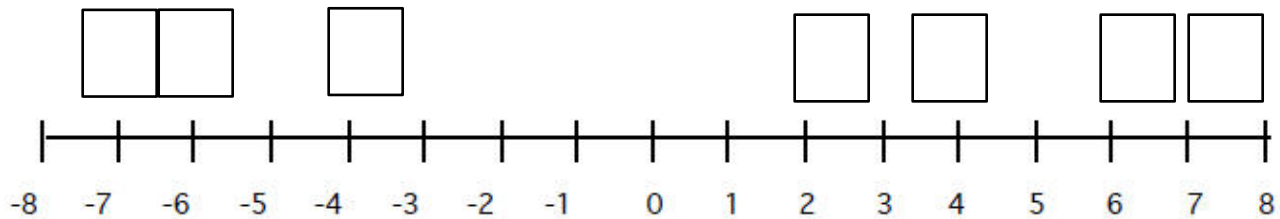
$A: -\sqrt{14}$

$B: 2\pi$

$C: -3\sqrt[3]{8}$

$D: \sqrt[3]{18}$

$E: \sqrt{15}$



6. Compare the value of each expression to $\sqrt[3]{125}$. Write the expression in the correct box.

$\sqrt{25}$

$\sqrt[3]{\frac{216}{8}}$

12^2

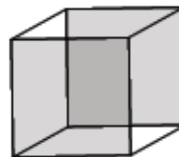
$\sqrt{125}$

$(1)^7$

$\sqrt[3]{\frac{1000}{125}}$

Less Than $\sqrt[3]{125}$	Equal to $\sqrt[3]{125}$	Greater than $\sqrt[3]{125}$

7. The cube shown has a volume of 216 cm³. What is the side length of the cube?



$V = 216 \text{ cm}^3$

8. Circle the greater number in each of the pairs (a)–(e) below.

a. Which is greater? 8 or $\sqrt{60}$

b. Which is greater? 4 or $\sqrt{26}$

c. Which is greater? $\sqrt[3]{64}$ or $\sqrt{8}$

d. Which is greater? $\sqrt[3]{125}$ or $\sqrt{30}$

e. Which is greater? -7 or $-\sqrt{42}$

f. Put the numbers 9, $\sqrt{52}$, and $\sqrt[3]{216}$ in order from least to greatest.